

CONFIDENTIAL - NOT FOR PUBLIC RELEASE

SITE SUMMARY AND RECOMMENDATION

DECLASSIFIED

6/5/15
Date: _____ Initial: *jl*

The Upper Mountain Road site (EPA ID No. NYN000206697), hereinafter referred to as "the UMR site" or "the site", consists of a small area of radionuclide contamination located at geographic coordinates 43.15553, -79.02245 (tax parcel 115.08-1-27) in Lewiston, NY. The area of observed contamination is approximately 1,493 square feet (ft²) and is located on the vacant parcel 115.08-1-27, which is owned by Talarico Bros. Building Corp (TBBC) and covers approximately 10.2 acres. The area of observed contamination is located at the entrance of the driveway that is currently utilized by the 738 Upper Mountain Road residence, although was historically used as an access road to the vacant property owned by TBBC. The residence is on a separate property from the area of contamination. The UMR site is bordered to the north by Upper Mountain Road, residential properties, and a further wooded area; to the east and west by residential properties; and to the south by a wooded area.

In July 1985, members of the Radiological Survey Activities (RASA) group at Oak Ridge National Laboratory (ORNL) performed the radiological survey of 738 Upper Mountain Road, which documented a maximum gamma exposure rate of 710 microroentgens per hour (μR/hr). The area with these readings was an area approximately 10 feet wide by 59 feet in length along a ditch and gravel residential driveway. The survey showed that the 738 Upper Mountain Road anomaly is associated with the asphalt driveway that contained a phosphate slag material. This rocky-slag waste material was used for bedding under asphalt surfaces and in general gravel applications at the UMR site and 61 other locations in the Niagara Falls area identified by ORNL. Biased surface soil samples collected in conjunction with the study indicated the presence of radium-226 (Ra-226), uranium-238 (U-238), and thorium-232 (Th-232) at the UMR site. The subsequent November 1986 report stated that all the contaminated soil and rock samples collected had approximately equal concentrations of Ra-226 and U-238, which suggested to the investigators that the rocks probably originated from a singular source. The origin of the thorium-bearing material was unknown; the report postulated that its source was from some type of mineral extraction activity in the Niagara Falls area. The report stated that the 738 Upper Mountain Road anomaly was not related to materials connected with Niagara Falls Storage Site (NFSS), including materials that were transported to NFSS.

During a reconnaissance performed by the New York State Department of Health (NYSDOH) and New York State Department of Environmental Conservation (NYSDEC) on July 9, 2013, screening activities showed radiation levels at 300 μR/hr with a hand-held pressurized ion chamber (PIC) and 105,000-110,000 cpm with a sodium iodide (NaI) 2x2 scintillation detector; the singular reading was taken at the end of the driveway adjacent to Upper Mountain Road.

In order to establish the area of observed contamination, Weston Solutions, Inc. (WESTON®) performed a complete gamma screening of the site on September 10, 2013. Significant readings (i.e., 2x the site-specific background) of gamma screening results were used to establish an area of observed contamination of approximately 0.03 acres, or 1,493 ft². The approximate depth of the slag material is 0-8 inches below the ground surface (bgs). The volume of on-site contaminated soil is unknown; therefore, the area measure is used as the hazardous waste quantity for the purpose of this report.



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On December 12, 2013, WESTON personnel collected a total of nine soil samples (including one environmental duplicate sample) and two slag samples from the UMR site. Soil samples were also collected from two locations suspected to be outside the influence of the area of observed contamination to document background conditions. At each sample location, soil samples were collected directly beneath slag material; at locations where a radioactive layer was not present, the soil sample was collected at the equivalent depth interval. The slag samples consisted of pulverized silty sand with rocks, cobbles, and gravel (i.e., radioactive waste material mixture) rather than singular pieces of slag.

On May 1 and 2, 2014, WESTON personnel collected radon and thoron concentration measurements from locations on and in the vicinity of the UMR site. At the selected locations in background areas, above the source material, and off the source area, radon and thoron concentration measurements in pCi/L were collected with RAD7 radon detectors. The radon and thoron measurements were collected at heights of one meter above the ground surface. The measurements included uncertainty values, which were taken into account to calculate adjusted concentrations for evaluation of observed release in the air migration pathway. There were no radon or thoron concentrations that exceeded the site-specific background, nor were there any adjusted concentrations that equaled or exceeded a value two standard deviations above the mean site-specific background concentration for that radionuclide in that type of sample (i.e., there is no evidence of an observed release to air from site sources).

The soil samples collected by WESTON were submitted for analysis of Target Analyte List (TAL) metals, including mercury; isotopic thorium (IsoTh), isotopic uranium (IsoU), Radium-226, and Radium-228 by alpha spectroscopy; and radioisotopes by gamma spectroscopy. Analytical results indicate concentrations of radionuclides found in the slag and soil to be significantly higher than at background conditions.

An HRS QuickScore (Version 3.0.5) analysis of the Upper Mountain Road site was conducted on the basis of an area of observed contamination for the soil exposure pathway (i.e., on-site soil contaminated with radionuclides), and potential to release to the surface water and air migration pathways. This analysis results in a site score of 2.30, which is below the 28.5 minimum score required for placement on the NPL.

Based on an evaluation of the above conditions, a recommendation of **NO FURTHER REMEDIAL ACTION PLANNED (NFRAP)** is given for the Upper Mountain Road site.